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ABSTRACT

Expectant parents are introduced to the effects of a variety of drugs on the unborn baby. Material is divided into seven sections. Section 1 deals with the most frequently used recreational drugs, including alcohol, marijuana, narcotics, depressants, stimulants, inhalants, and hallucinogens. Sections 2 and 3 focus on the effects of prescription and nonprescription drugs, while chapter 4 discusses the potential hazards of cigarette smoking and caffeine intake. Non-drug medications such as vitamins and food additives are treated in section 5. Sections 6 and 7 describe the relationship between drug taking and lactation and emphasize the importance of medical supervision during pregnancy. A selected bibliography concludes the booklet. (LP)

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DRUGS, ALCOHOL & PREGNANCY

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Drugs, Alcohol, and Pregnancy
Something to Think About

Pregnancy. A time for plans, hopes and dreams. Also a time for worry and fear. Every woman worries about her baby. Will it be a boy or a girl? Will it be happy and healthy? Will it have the right number of fingers and toes?

Whether you are pregnant, planning a baby, or merely curious, think about the things in your life right now which might affect the lives of your children tomorrow, a few months or a few years from now. Drugs are one of those things. And, by drugs, we don't just mean heroin or alcohol or prescription drugs. We mean *all* drugs. Think for a moment. How many times tc you reach for a cigarette or an aspirin or take just a few pills to pick you up or help you sleep or simply help you cope? And what about things like cough syrup and Rolaids that most people don't even realize *are* drugs?

Nearly everything an expectant mother takes into her body, whether diet pills or coffee or bacon and eggs, can have an effect on her developing child. And not every effect is a good one. Drugs of all types pose varying degrees of danger to both mother and child. And many times drugs don't have to be "abused" in order to pose a threat. Sometimes even infrequent use during a critical developmental phase can have disastrous consequences.

So what can you do? Begin by reading this booklet. And if you're already pregnant, begin today to safeguard your baby's health. Merely by being aware of the possible harmful effects of many drugs is an important means of protecting your child. It's something to think about. And thinking about the drugs in your life is an important first step, an important beginning to the best of all beginnings—a new life.

RECREATIONAL DRUGS

This section will deal with some of the drugs which are most frequently used and abused in America. Many of these drugs have been found to be dangerous if taken during pregnancy. Some have serious effects on the growing fetus, while others linger on after birth, interfering with normal physical and psychological development. Pregnant women often use these drugs in combination with other substances, both prescribed and self-administered. For example, alcohol-tranquilizer combinations have been shown to be harmful to the fetus. Unfortunately, little is known about the combined effects of the many drugs women take during pregnancy. But we can guess that in most instances the combined impact will exceed the effects of any one of the drugs taken alone. In any case, an expectant mother should *never* take any recreational drugs, either alone or in combination with prescription or over-the-counter medications. It just isn't worth the risk.

ALCOHOL: Heavy use of alcohol has long been associated with birth defects and behavioral problems in infants, but until recently, many physicians believed that drinking up to one ounce of liquor per day would not be dangerous to the developing fetus. Some doctors even advised their patients to relax with a drink now and then. However, recent findings suggest that alcohol is not as safe as it has been believed to be. In fact, it may be one of the more dangerous drugs for a pregnant mother and her child.

When a pregnant woman drinks, the alcohol flows easily through the placenta to the fetus. However, since the child's liver is not yet developed enough to breakdown the alcohol, it remains in the child's system much longer than in the mother's. And not only is the fetus physically incapable of dealing with an occasional cocktail, but frequent drinking can cause health and behavioral problems which will follow the child through the rest of its life.

Alcohol affects the growing fetus in a number of ways. It can cause growth retardation, both before and after birth, and changes in physical features and behavior. Babies affected by growth retardation weigh less and are shorter at birth than babies of non-drinking mothers. Studies show that these children do not usually catch-up with their peers in later life. Physical changes linked to alcohol use during pregnancy include smaller heads, flat noses, narrow eyes, and thin upper lips. Bones, limbs, muscles, skin, and heart are also likely to be damaged.

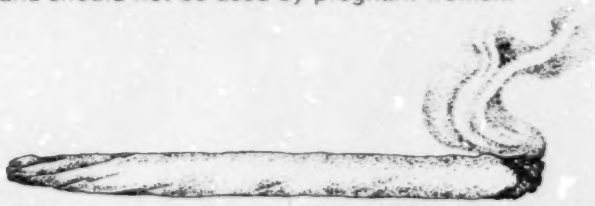
Behavioral changes associated with the use of alcohol during pregnancy include restlessness and irritability, often accompanied by convulsive movements, tremors and problems in sleeping. A reduction in normal infant responses to movement, touch, light, and sound has been reported, and mild to moderate retardation is a frequent outcome.

Fetal Alcohol Syndrome (FAS) occurs when a child exhibits symptoms from all three of these areas. FAS is a set of identifiable birth defects which are caused by heavy use of alcohol during pregnancy. Studies indicate that FAS may occur in as many as one or two of every 1000 live births.

Alcohol's effects on the unborn are dose-related. This means that the more alcohol the mother consumes, the greater her chances of bearing a child with physical defects or mental retardation. Fetal Alcohol Syndrome is most likely to occur in the children of heavy drinkers—those who have five or more drinks per day. Yet, women who have two to four drinks per day also risk bearing children with physical and behavioral problems. Even binge drinking—the occasional consumption of large amounts of liquor—has been found to damage the growing fetus. And, as the Surgeon General has recently concluded, drinking even one or two drinks per week increases the possibility of stillbirth or miscarriage.

Alcohol poses the greatest danger to the fetus during the first three months of pregnancy. Unfortunately, this is also the period during which many women are unaware that they are pregnant. If you are planning a child, don't drink. If you discover that you are pregnant, don't just reduce your drinking, stop completely! Also be aware of the alcoholic content of many other substances and over-the-counter medications. Your baby's worth it.

MARIJUANA: Marijuana is one of the most popular recreational drugs used by women of child-bearing age. At present we know only a little about marijuana's effects on reproduction, and even less of its impact on a growing fetus. While future research may answer many of our questions, what is now known about its effects suggests that marijuana should not be used by pregnant women.



Marijuana has been found to alter levels of certain hormones which are important in regulating reproduction in men and women. Studies have linked the drug with temporary irregularities in ovulation and menstruation, and hint that marijuana may interfere with the attachment of fertilized eggs to the wall of the uterus. In men, the drug has been found to reduce levels of hormones and sperm, and cause changes in sperm shape. While these effects appear to be reversible, the longer-term impact of such changes is unknown.

Animal studies indicate that the fetus may be particularly vulnerable to marijuana. THC, marijuana's principle psychoactive ingredient, and

other chemicals in the drug pass easily through the placenta, and are, in fact, stored in the fatty tissues of the fetus. Possible effects include lower weight at birth and an increase in the likelihood of miscarriage or stillbirth. One of the few available human studies has linked marijuana use during pregnancy with behavioral problems in newborn infants. Reduced sensitivity or a total failure to respond to light was discovered in infants whose mothers smoked marijuana a few times a week during pregnancy. The study also reported an increase in tremors and startle responses among exposed infants.

Marijuana has been attacked in the past as a possible cause of chromosome damage. A few studies have linked the drug to increased chromosome breakage and reduced numbers of chromosomes in isolated cells. These changes have not, thus far, been linked to birth defects, but do suggest the possibility of more subtle changes in normal fetal growth and development.

To date, marijuana research poses many more questions than answers. But the possibility of harmful effects to both fetus and infant suggests that the wisest course is to discontinue the use of marijuana altogether during pregnancy.

NARCOTICS: Narcotics are powerful drugs which relieve pain and induce sleep. There are two kinds of narcotics: opiates and synthetics. Opiates derive from the opium poppy and include morphine, codeine and heroin. Morphine and codeine are widely used as pain-relievers and codeine is an ingredient in many cough syrup preparations. Synthetic narcotics include such prescription drugs as Demerol®, Darvon®, Talwin®, and Percodan®. Demerol is often given to pregnant women to relieve pain during labor, while Darvon has become notorious in its own right as one of the most widely prescribed and widely abused drugs in America. Methadone, a drug used in treatment of heroin addiction, is also a synthetic narcotic.

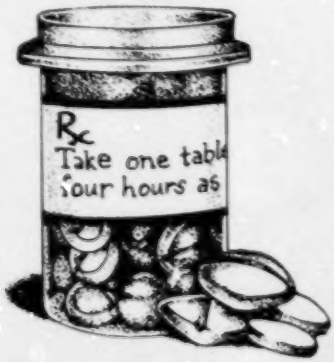
All narcotics share similar effects although potency and strength may vary according to the drug. All narcotics produce a condition called tolerance—in which a user must constantly increase his or her dosage of the drug in order to achieve the same effects. All narcotics also have a high potential for producing physical and psychological dependence—in the developing baby, as well as in the expectant mother.

The potential for addiction with all narcotics is particularly important for pregnant women to consider. When a woman uses a narcotic regularly, the chances of her baby developing dependence on the drug are quite high. The incidence of infant addiction to heroin and methadone has been well documented in the past decade. However, recent studies have reported similar cases of addiction and withdrawal in infants whose mothers used Darvon, Talwin, and Demerol during

pregnancy. The fetus is not able to metabolize, or breakdown, narcotics. Like alcohol, traces of the drug remain in the baby's system much longer than in the mother's. In heroin-using mothers, this persistence produces a high risk of early fetus death. Symptoms of infant addiction-withdrawal include irritability, tremors, vomiting, sweating, diarrhea and inability to gain weight. Addicted babies may suffer breathing problems and cry for hours in shrill, high-pitched tones. While the immediate symptoms of narcotic withdrawal can be treated and generally pass in a few weeks, less acute signs can last for up to six months.

A few recent studies suggest that the effects of narcotics taken during pregnancy do not stop following withdrawal. Many of these children suffer growth retardation, learning disabilities, and other health problems. Talwin, particularly, has been linked with severe growth retardation, and heroin use may trigger "Sudden Infant Death Syndrome," or "crib-death," months after withdrawal is completed.

It's hard to imagine a newborn baby experiencing the misery of "cold turkey" withdrawal, but that's exactly what happens when a pregnant addict uses narcotics. If you are a heroin or methadone user, tell your doctor or the hospital staff so they can take steps to protect your baby's life. If you use any other narcotic drugs, STOP! Contact a doctor, clinic, or treatment program, but get yourself the help you need to protect your baby. It's the least you can do.



DEPRESSANTS: Depressant drugs are often called downers. These drugs act on the central nervous system to induce sleep, relieve anxiety and relax muscles. Depressant drugs include sleeping pills and tranquilizers. There are two kinds of sleeping pills: barbiturates—including drugs like Amytal®, Nembutal®, Seconal®, and Tuinal®—and non-barbiturate sedative hypnotics such as Mequin®(formerly known as Quaalude®), Placidyl®, and Dalmane®. Valium® and Librium® are two popular forms of tranquilizers. Others include Ativan®, Miltown®, and Tranxene®.

Like narcotics, the depressant drugs produce tolerance in the user and have a relatively high potential for physical and psychological dependence. And all share the risk of causing infant addiction and related health problems when used during pregnancy.

Sleeping pills pose serious dangers to both the mother and her unborn child. These drugs are highly addicting and can be fatal if taken in large doses. In addition to the hazards of infant withdrawal associated with exposure to barbiturates and sedatives, research has found that newborn babies can have a lot of other problems as well. Difficulty in breathing, internal bleeding, and poor responses to environment are a few of the symptoms of sleeping pill-induced damage. One study linked the barbiturate phenobarbital with delayed ovulation, resulting in cellular damage. Other research suggests that sleeping pills may alter normal patterns of behavior and growth.

Tranquilizers also pose a threat to the health and well-being of the developing fetus. Valium and Librium are among the most widely used prescription drugs in the United States, and Valium is often taken during pregnancy to relieve anxiety and depression. It is also administered during labor to ease pain and relax muscles. But, these drugs can cause severe birth defects in infants, particularly if used in the first three months of pregnancy. Defects in the lips and mouth are common, and heart and arteries may also be affected. Deafness, mental retardation, and malformed joints have also been associated with the use of tranquilizers in the early, critical phase of pregnancy.

Depressant drugs can be dangerous to mother and child, especially if taken in combination with other substances, such as alcohol. Unfortunately, we don't know all of the effects these drugs may have on the developing fetus. Thalidomide was a popular tranquilizer in the 1950's, prescribed as an anti-anxiety agent during pregnancy. Gradually, it became clear (too late, unfortunately, for many children) that the drug caused severe birth defects. Because of the widespread use of depressant drugs, many doctors and mothers are in the same position of having to "wait and see" what the effects may be for mother and baby. It is much safer to avoid the use of sleeping pills and tranquilizers altogether, and substitute such positive alternatives as exercise and plenty of rest.

STIMULANTS: Stimulant drugs are often called uppers. These drugs act on the central nervous system to reduce appetite and fatigue and produce feelings of energy and alertness. There are several types of stimulants, both prescription drugs and street "speed." The most popular are the amphetamines, such as Benzedrine®, Biphetamine®, Dexedrine®, Methedrine®, and Desoxyn®. Preludin® is an amphetamine-based drug which is widely prescribed as a diet aid. Street "speed" is generally a grab-bag of chemicals, with caffeine, phenylpropanolamine, and ephedrine, the most common ingredients. Completing the stimulant category is cocaine, the high-priced "champagne of drugs," which is derived from the coca plant.

Stimulants have been found to cause extensive damage to the fetus, especially if taken during the first trimester, or first three months of pregnancy. Because these drugs are often found in diet medications, they pose a particularly serious hazard to women who use them without realizing that their weight gain is due to pregnancy. Preludin has been linked with abnormal skeletal and organ development affecting the stomach, kidneys, and intestines. Amphetamine use increases the risk of fetal malformation, and has been associated in several studies with congenital heart and brain defects and possible miscarriage.

Amphetamine use also poses dangers to infant development. Newborn babies of long-term amphetamine users exhibit bizarre, disturbed behavior. Coordination and response to the environment is poor and periods of excessive agitation are followed by lethargy and depression.

Little is known about the effects of cocaine use on fetal and child development. However, because the effects of cocaine are similar to those of amphetamines, we can speculate that the drug poses similar dangers to the unborn child.

Unlike depressants, stimulant drugs do not cause actual physical addiction. However, the potential for psychological dependence on stimulants is very high. This type of dependence can, and often does, lead to a merry-go-round of multi-drug use—stimulants to pick you up and depressants to bring you down so you can sleep. And the fetus has a front row seat for the entire trip.

If you are on this merry-go-round, you can do yourself and your child a real favor by jumping off and getting professional help. And, if weight gain is a big problem, exercise, rest, and a sensible diet excluding the use of any diet pills or chemical stimulants is the best way to insure the safety of both you and your baby.

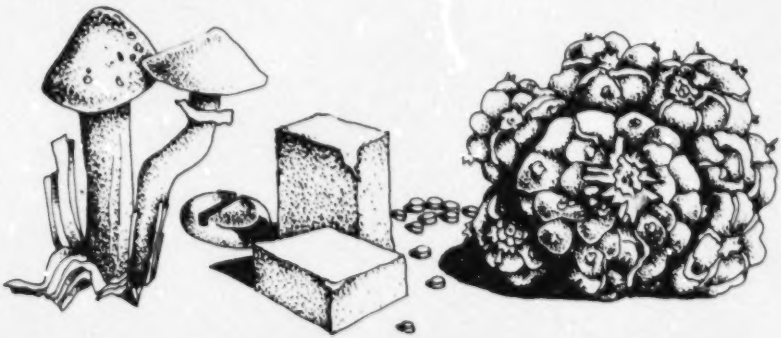
INHALANTS: Inhalants continue as popular, relatively easily-obtained recreational chemicals. The three most common types of inhalants today are volatile solvents, such as glue, gasoline, and paint thinner; the aerosols, such as hairspray and deodorants; and the nitrites, such as amyl and butyl nitrite and nitrous oxide. The vapors from these substances can be sniffed directly from the container, or sprayed into plastic bags and placed over the nose and mouth.

Although very little scientific work has been conducted in the area of inhalant use and abuse, researchers feel that these substances may be extremely hazardous to both mother and child. Recent studies have suggested the existence of a "fetal solvent syndrome" similar to the "fetal alcohol syndrome." Severe mental retardation, seizures, abnormal facial features, and an increase in the chances of miscarriage or stillbirth are among the possible effects of the use of inhalants during pregnancy. And, prolonged sniffing of solvents containing high levels of lead, such as leaded gasoline or paint thinner, can produce lead

poisoning. Lead poisoning itself is a serious problem which can cause damage to the brain and nerves, paralysis, and death.

Inhalant chemicals are risky substances for anyone, but particularly for the unprotected fetus. So for the sake of yourself, as well as your baby, breathe air—not chemicals.

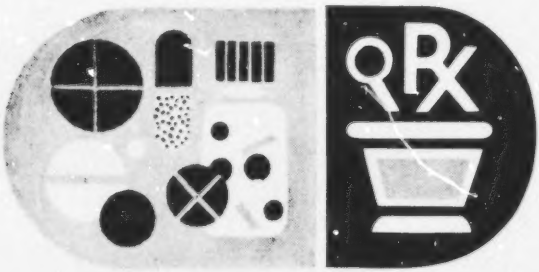
HALLUCINOGENS: Hallucinogens are a unique class of drugs. They act on the central nervous system, producing a wide range of perceptual changes and distortions in users. Depending upon the dose and the drug, these perceptual changes can be very intense and appear very real. The most well known of the hallucinogens is LSD or "acid." Other hallucinogenic drugs include MDA, an hallucinogenic amphetamine, the hallucinogenic mushroom psilocybin, and mescaline, a derivative of the peyote cactus. PCP, sometimes called "angel dust" and a variety of other names (including "tic", "tac", and "THC,") is the most unusual of this class of drugs. The effects of PCP are similar to the depressants and the anesthetics as well as the hallucinogens. PCP's multiple effects make it one of the more dangerous of the hallucinogenic drugs, for both the pregnant and nonpregnant user.



To many people, the hallucinogens are "mind-expanding." To others they are frightening. But, for the pregnant woman and her unborn child, they may be dangerous. Studies have shown that these drugs easily cross the placenta to the fetus. In 1967, a group of scientists reported that LSD caused an increase in chromosome breakage which they proposed might lead to birth defects. Over the past 15 years, this study has been both supported and challenged by other researchers. A few cases of birth defects in mothers with a history of LSD use have been documented. But, no positive association between the drug and the birth defects has been established. We can only conclude that LSD has not yet been scientifically proven to cause defects in infants at low doses. On the other hand, we can't be sure that it does not cause other, more subtle, types of damage. And, more importantly, we have no idea what these types of changes might mean for you or your baby.

This uncertainty does not extend to PCP. "Angel dust" may be one of the most dangerous drugs a woman can take during pregnancy. PCP has been found to linger in an infant's body up to one week following last exposure. One investigator reported severe brain damage, birth defects, and eventual death in a baby born to a mother who had a history of PCP use during pregnancy. PCP may also cause a wide range of harmful effects which could interfere with normal child growth and development. And, the drug might cause the same types of bizarre personality changes and unusual behavior in children which have been documented for adult users. While the research on PCP may be sketchy at present, the conclusion is not. If you're pregnant, stay away—far, far away—from this drug.

At best, current research shows only a big question mark regarding the reproductive effects of hallucinogens other than PCP. But, as with all other recreational drugs, the best way to prevent possible harm to your baby is not to take the risk at all.



PRESCRIPTION DRUGS

This category encompasses a wide variety of medications prescribed by doctors to treat or counter specific health problems. These drugs range from antibiotics, antihistamines, and diabetes medicines to hormones, birth control pills, and blood pressure medications. While some prescription drugs may be relatively safe if taken in the prescribed amounts, other pose serious hazards to the health and well-being of the developing fetus.

It is difficult to make blanket recommendations regarding the use of prescription drugs during pregnancy since they are usually taken for specific health reasons. In addition, many medications have only recently been found to be dangerous to the fetus. For example,

Bendectin, prescribed for relief of morning sickness, recently came under attack as a possible cause of congenital heart defects. Although the charges against Bendectin have been found to be false, this case highlights a crucial problem in the area of prescription drugs: Possible harmful effects on the growing fetus from prescription drugs may not be known until after the damage is done—after birth. And, like the Thalidomide disaster, after birth is too late for many children and for their mothers who took medications unaware of any possible adverse effects.

Unlike the recreational drugs we discussed earlier, it's impossible to advise expectant mothers to categorically stop taking prescription medications. However, a good rule of thumb is to check with your doctor as soon as you suspect that you're pregnant. And, if you and your doctor decide that the medications should be continued, take them only in the prescribed amounts. Your need to take prescription drugs must be weighed against their possible effects on your baby. It's the only way to insure the safety of both of you.

NON-PRESCRIPTION AND OVER-THE-COUNTER DRUGS

Everyone knows how to "spell relief" these days and, for most people, relief begins with an "R" and looks like a roll of Life Savers.

Antacids are a common and widely accepted non-prescription drug. Non-prescription drugs are those which can be purchased over-the-counter in any pharmacy or drugstore. They are found in almost every medicine cabinet in the country and are heavily advertised on TV. In fact, these drugs are so accepted that many people don't even realize that they *are* drugs.

There are over 500,000 non-prescription drugs on the market today. Most people, including pregnant women, swallow them without a second thought. In fact, recent surveys show that expectant mothers are among the largest group of consumers of over-the-counter drugs. Many pregnant women regularly take three or more different non-prescription drugs, with aspirin, antacids, decongestants, and cough medicines among the most popular.

Yet, current research suggests that over-the-counter drugs are not nearly as safe as their availability implies. And, for the expectant mother, these drugs can even be dangerous to her baby.

Aspirin is probably the best example. Eighty percent of all pregnant women take aspirin at least once during their pregnancy. But recent studies have linked aspirin use with prolonged bleeding and complications in delivery which could endanger the lives of both mother and child. Antacids, taken for relief of indigestion, have been associated with higher risks of malformation and heavy bleeding after birth. The fetus seems particularly susceptible to the harmful effects of aspirin in the last three months of pregnancy, while antacids appear to be most dangerous if used in the first trimester.

The following over-the-counter drugs should be avoided during pregnancy, unless taken under a physician's supervision:

- aspirin
- antacids
- decongestants
- cold and allergy preparations, including cough syrup
- sedatives, sleeping aids, and anti-anxiety drugs
- laxatives
- minor stimulants and diet aids

You may feel frustrated or cranky or tired or worried. Every part of your body may ache. Remember that these are natural reactions. They are the body's way of dealing with pregnancy and change. Instead of reaching for the Rolaids, remember that rest, exercise, and a common-sense diet can be the best medicines of all. And, in the long-run, natural remedies will leave you with a lot less to worry about.

OTHER COMMONLY USED SUBSTANCES

TOBACCO: Cigarette smoking has received a lot of publicity as a health hazard. Yet only recently have scientists begun to explore the possible effects of smoking on the unborn child. And what they have found confirms the argument that pregnant women should not smoke.

Tobacco smoke contains over 2000 different chemicals. Nicotine and carbon monoxide are the two most well known, and possibly the most dangerous. Both easily cross the placenta and decrease the amount of oxygen available to the fetus. Nicotine also produces an increase in fetal blood pressure.

These changes have been linked with a number of developmental effects in newborn babies. First, babies of smokers tend to be much smaller and weigh less at birth than those of non-smoking mothers. Tobacco smoking can also cause complications in pregnancy, such as premature birth and prolonged labor and bleeding, as well as increase the chances of miscarriage or stillbirth. Several studies have linked a higher incidence of "Sudden Infant Death Syndrome" with cigarette smoking during pregnancy.

Tobacco has its most harmful effects in the last three months of pregnancy. This gives you a helpful learning period. Many times the impulse is to smoke more as a release for nervousness, anxiety, or depression. DON'T! Concentrate on cutting down, then quit by the fourth month. You'll be doing yourself, and your baby, a favor.

CAFFEINE: Caffeine is the number one stimulant in the United States. It is present in many products which Americans use daily, including coffee, tea, cola, and chocolate. It can also be found in many over-the-counter medications. Because caffeine is widely used and easily available, concern has been focused on the possible effects on the fetus of heavy caffeine use. Several animal studies have linked caffeine in amounts equivalent to three or four cups of coffee per day to congenital birth defects. While there have not yet been any reports of caffeine-induced birth defects in humans, an expectant mother should consider the side effects she may encounter from large amounts of caffeine. Because caffeine is a stimulant, it produces a feeling of increased energy followed by a mild depressant effect. In large doses, caffeine can cause sleeplessness, irritation, and anxiety. While not necessarily harmful, these side effects might make the emotional period of pregnancy less comfortable.

NON-DRUG MEDICATIONS AND PREPARATIONS

VITAMINS: Vitamins are an essential ingredient of prenatal health care. Many people believe that the more vitamins you take, the healthier you are. But the overwhelming evidence suggests that this is just not true. Vitamins should be a supplement to, not a substitute for, proper nutrition. During pregnancy, vitamin intake should be even more carefully balanced with proper nourishment. While vitamin deficiency is a well known cause of various birth defects, developmental disorders, and probiems during delivery, excessive amounts of certain vitamins can also be dangerous.

Moderation is the key to safe and successful use of vitamins during pregnancy. *Never* self-prescribe vitamins. If you are receiving the proper levels of nutrients in your diet, additional vitamins may only increase the chances of harm to your baby. See your doctor early in your pregnancy. Together you can develop the proper diet and vitamin plan to meet your—and your baby's—needs.

FOOD ADDITIVES: Although little research has been conducted in this area, a growing body of medical evidence suggests that many food

additives may pose dangers to the health and well-being of infants. These substances include such "flavor enhancers" as monosodium glutamate (MSG) and protein hydrolyzates, and preservatives such as BHA and BHT. Protein hydrolyzates have become a popular additive in commercial baby food as a substitute for MSG which was found to cause brain damage in laboratory animals. Now similar studies suggest that the hydrolyzates might not be as safe as earlier believed. BHT is suspected of causing damage to the liver and other organs in both adults and infants. Because of the difficulty, not to mention the expense, of going "all-natural" in the foods prepared for children, it is suggested that the new mother carefully screen all commercially prepared foods for excessive amounts of these additives.

DRUGS AND LACTATION

Along with the current trend in America toward "natural childbirth" has come the increasing popularity of breast-feeding. Breast-feeding has many advantages over commercially prepared formulas and foods. It's nutritious, convenient, and safe, in most instances. However, it is important to remember that many drugs taken after delivery can be passed on to the baby via breast milk. Many of these drugs are almost as dangerous to the baby's health in this form as drugs taken during pregnancy (alcohol, narcotics, certain depressants, and prescription drugs). Others interfere with the mother's ability to produce milk. Marijuana, particularly, has been found to inhibit lactation in new mothers.

Proper care of the infant does not end after birth. In fact, birth is only the beginning. And your child deserves the best. Right?

THE BEGINNING...

Pregnancy is equal parts wonder and hope, worry and fear. Pregnancy can be a frustrating and anxious, irritable and exhausting time. But, if you plan it right, it can also be a more comfortable and happy time for you, and a safer one for your child. Now is the best time to begin. See a doctor as soon and as often as possible. Don't take any recreational drugs, and ask your doctor about the drugs he prescribes or the ones you may already have in your medicine cabinet. And, if you do take any drugs, remember that it's safer to stop taking them immediately, than to wait until tomorrow.

Sound like a lot of work? You ain't seen nothing yet. Pregnancy, after all, really *is* only the beginning.

SELECTED BIBLIOGRAPHY

GENERAL SOURCES:

Chemical Survival: A Primer for Western Man and Woman. 2nd ed. Phoenix: D.I.N. Publications, Sept. 1979.

Done, K. "The Toxic Emergency: Babies' Secondhand Problems." *Emergency Medicine.* 30 Apr. 1981.

Drug Dependence in Pregnancy: Clinical Management of Mother and Child. NIDA Research Monograph. Washington: Dept. of HHS, 1979.

Ferguson, Patricia and Thomas Lennox, eds. *Drugs and Pregnancy.* NIDA Research Monograph. Washington: Dept. of HHS, 1974.

Glass, Leonard and Hugh E. Evans. "Perinatal Drug Abuse." *Pediatric Annals.* 8 (2), Feb. 1979.

Golbus, Mitchell S. "Teratology for the Obstetrician: Current Status." *Obstetrics and Gynecology.* 55 (3), Mar. 1980.

Julien, Robert M. *A Primer of Drug Action.* San Francisco: W.H. Freeman & Co., 1978.

Perlin, Michael J. and Kenneth J. Simon. "The Epidemology of Drug Use During Pregnancy. *The International Journal of the Addictions.* 14 (3), 1979.

Platzker, Arnold C.D., Cheryl D. Lew and Diana Stewart. "Drug 'Administration' via Breast Milk." *Hospital Practice.* Sept. 1980.

Robe, Lucy Barry. *Just So It's Healthy.* Minneapolis: CompCare Publications, 1977.

MARIJUANA:

Fried, P.A. "Marihuana Use by Pregnant Women: Neurobehavioral effects in Neonates." *Drug and Alcohol Dependence.* 6, 1980.

U.S. Government. Dept. of Health and Human Services. *Marijuana and Heath.* 8th report to Congress, 1980.

U.S. Senate. Subcommittee on Criminal Justice. Committee on the Judiciary. *Health Consequences of Marihuana Use.* 96th Cong., 2nd sess. H96-54. Washington: Governt. Printing Office, 1980.

NARCOTICS:

Heroin-Addicted Parents and Their Children: Two Reports. National Institute on Drug Abuse. Services Research Report. Washington: Dept. of HHS., 1980.

Wapner, R.J., J. Fitzsimmons, R.D. Ross, M.E. Rudrauff, A.B. Kurtz and L.P. Finnegan. "A Quantitative Evaluation of Fetal Growth Failure in a Drug-Abusing Population," NIDA Monograph #34. *Problems of Drug Dependence, 1980.* Washington: Dept. of HHS, 1980.

DEPRESSANTS:

"Pain-Killers in Labor: 'Caution Flag is Up'" *Medical World News.* 5 Feb. 1979.

Wesson, Donald R. and David E. Smith. *Barbiturates: Their Use, Misuse and Abuse.* New York: Human Sciences Press, 1977.

STIMULANTS:

Ramer, Cyril M. M.D. "The Case History of an Infant Born to an Amphetamine-Addicted Mother." *Clinical Pediatrics.* 13 (7), July 1974.

INHALANTS:

Alasdair, G.W. Hunter, Diane Thompson and Jane A. Evans. "Is There a Fetal Gasoline Syndrome?" *Teratology.* 20, 1979.

Toutant, Claire and Steven Lippmann. "Fetal Solvents Syndrome." *The Lancet.* 23 June 1979.

HALLUCINOGENS:

Cohen, Maimon and Yosef Shiloh. "Genetic Toxicology of Lysergic Acid Diethylamide." *Mutation Research.* 47,1977-78.

Fort, Joel and Ralph Metzner. "LSD, Chromosomes and Sensationalism." *Psychedelic Review.* 10, 1969.

Golden, Nancy L., Robert J. Sokol and Leslie Rubin. "Angel Dust: Possible Effects on the Fetus." *Pediatrics.* 65 (1), Jan. 1980.

Marble, Richard D., Richard G. Thomas and Melvyn L. Sterling. "Screening for Angel Dust in Newborns." *Pediatrics.* 66 (2) Aug. 1980.

Sankar, D.V. Siva. *LSD—A Total Study.* Westbury, N.Y.: PJD Publications, Ltd. 1975.